

# **THE BASIS OF MY FORECASTING METHOD FOR GRAINS**

**by W. D. Gann  
(1951 course)**

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## I N D E X

Page

2. HOW TO MAKE CHARTS  
GEOMETRICAL ANGLES
3. HOW TO DRAW GEOMETRICAL ANGLES
4. PATTERN CHART FOR GEOMETRICAL ANGLES
5. HOW TO DRAW ANGLES FROM A LOW POINT RECORDED ON GRAIN OPTION
7. BOTTOMS FROM WHICH TO DRAW ANGLES OR MOVING TREND LINES  
WHAT TO DO AFTER THE 45 DEGREE ANGLE FROM BOTTOM IS BROKEN
8. HOW TO DRAW ANGLES FROM TOPS ON DAILY, WEEKLY OR MONTHLY  
CHARTS
9. POSITION ABOVE 45 DEGREE ANGLE DRAWN FROM TOP
10. DOUBLE AND TRIPLE TOPS OR BOTTOMS  
PARALLEL ANGLES
11. GEOMETRICAL ANGLES OF MOVING TREND LINES DRAWN FROM "O"
12. "O" ANGLES STARTING AT THE TIME TOP IS MADE  
ANGLES FROM TOPS DOWN TO "O" AND UP AGAIN
13. TWO 45 DEGREE ANGLES FROM THE SAME BOTTOM  
ANGLES OR MOVING TREND LINES FROM TOP TO THE NEXT TOP
14. ANGLES FROM BOTTOM OF FIRST SHARP DECLINE
15. LAST SWING IN A BULL OR BEAR MARKET  
ANGLES FROM HIGHER BOTTOMS AND LOWER TOPS
16. SECTIONS OF MARKET CAMPAIGNS  
STRENGTH OR WEAKNESS DENOTED BY POSITION ON ANGLES  
When an Option is in the Weakest Position
17. When an Option is in the Strongest Position
18. Strongest Buying and Selling Points  
Regaining Angles or Crossing Lines  
WHEN GRAIN IS IN STRONG POSITION FROM BOTTOM AND  
IN A WEAK POSITION FROM TOP

Page

19. QUICK CALCULATION OF ANGLES  
LATITUDE AND LONGITUDE
20. RULE FOR KEEPING TIME PERIODS ON CHARTS  
Time Periods from Bottoms  
Time Periods from Tops
21. Points from which to Number Time Periods  
Squaring the Price Range with Time
22. Squaring the Range
23. Three Ways to Square Time and Price
24. Squaring Weekly Time Periods  
Squaring Monthly Time Periods
25. PRICE AHEAD OF TIME  
STRONGEST ANGLES FOR MEASURING TIME AND PRICE
26. CARDINAL & FIXED CROSS
27. DIVISION OF \$1,  $1/8$  POINTS  
(FORM CHARTS 1 to 12 FOLLOW PAGE 27)
28. FORECASTING GRAINS BY TIME CYCLES

## THE BASIS OF MY FORECASTING METHOD FOR GRAINS

Mathematics is the only exact science. All power under heaven and on earth is given unto the man who masters the simple science of mathematics. Emerson said, "God does indeed geometrize." Another wise man said, "There is nothing in the universe but mathematical points." Pythagoras, one of the greatest mathematicians who ever lived, after experimenting with numbers and finding the proofs of all natural laws, said, "Before God, was numbers." He believed that the vibration of numbers created God and the Deity. It has been said, "Figures don't lie." Men have been convinced that numbers tell the truth and that all problems can be solved by them. The chemist, engineer and astronomer would be lost without the science of mathematics.

It is so simple and easy to solve problems and get correct answers and results with figures; it seems strange so few people rely upon them to forecast the future of business, stocks and commodity markets. The basic principles are easy to learn and understand. No matter whether you use geometry, trigonometry or calculus, you use the simple rules of arithmetic. You do only two things: increase or decrease.

There are two kinds of numbers, odd and even. We add numbers which is increasing; we multiply which is a shorter way to increase; we subtract which decreases; and we divide which also decreases. With the use of higher mathematics, we find a quicker and easier way to divide, subtract, add and multiply, yet very simple when you understand it.

Everything in nature is male or female, white or black, harmony or inharmony, right or left. The market moves only two ways: up or down. There are three dimensions which we know how to prove: width, length and height. We use three figures in geometry: the circle, the square and the triangle. We get the square and triangle points of a circle to determine points of time, price and space resistance; we use the circle of 360 degrees to measure time and price.

There are three kinds of angles: the VERTICAL, HORIZONTAL and DIAGONAL which we use for measuring Time and Price Movements. We use the square of odd and even numbers to get, not only the proof of market movements, but the cause.

## HOW TO MAKE CHARTS

Charts are records of past market movements. The future is but a repetition of the past; there is nothing new. As the Bible says, "The thing that hath been, it is that which shall be." History repeats and with charts and rules we determine when and how it is going to repeat. Therefore, the first and most important point to learn is how to make charts correctly because, if you make an error on the chart, you will make an error in applying the rules to your trading.

**Spacing:** Use  $1/8"$  for  $1¢$  per bushel on the daily, weekly or monthly charts except when the price is selling below \$1 per bushel, then use  $1/2¢$  per bushel for each  $1/8"$  space on the daily chart only.

No space is skipped on the daily chart for Sundays or holidays; therefore, the time period is for actual market days, but you should carry the calendar days across the top or bottom of the daily chart so that you will know when the price is 45, 90, 120, 180, days etc., from an extreme low or high price.

**Weekly Chart:** When an option expires on May Wheat, or any other Grain, say, in the month of May for the May Option, and the new option does not start until August, you carry the time periods in weeks and begin the new option at the time period in the week in which it starts. This will enable you to always have the geometrical angles correct from any high or low, and to know the total time elapsed from any high or low price. This will make the geometrical angles correct for all past movements.

## GEOMETRICAL ANGLES

After long years of practical experience, I have discovered that Geometrical Angles measure accurately Space, Time Volume and Price.

Mathematics is the only exact science, as I have said before. Every nation on the face of the earth agrees that 2 and 2 equals 4, no matter what language it speaks. Yet all other sciences are not in accord as mathematical science. We find different men in different professions along scientific lines disagreeing on problems, but there can be no disagreement in mathematical calculation.

There are 360 degrees in a circle, no matter how large or how small the circle may be. Certain numbers of these degrees and angles are of vast importance and indicate when important tops and bottoms occur in Grains, as well as denote important resistance levels. Once you have thoroughly mastered the geometrical angles, you will be able to solve any problem and determine the trend of any Grain.

### GEOMETRICAL ANGLES (Contd.)

After 50 years of research, tests and practical applications, I have perfected and proved the most important angles to be used in determining the trend of the Grain Market. Therefore, concentrate on those angles until you thoroughly understand them. Study and experiment with each rule I give, and you will make a success.

We use geometrical angles to measure space and time periods because it is a shorter and quicker method than addition or multiplication, provided you follow the rules and draw the angles or lines accurately from tops and bottoms, or extreme highs and lows. You may make a mistake in addition, or multiplication, but the geometrical angles accurately drawn will correct this mistake. Example: If you should ~~count across~~ the bottom of your chart 120 spaces which represents 120 days weeks or months then you begin at "0" and number ~~vertically~~ on your chart up to 120. From this top point at 120, draw a 45 degree angle moving down. This will come out at 0 on 120 points over from the beginning. If you have made a mistake in numbering, this will correct it.

Angles drawn on a chart always keep before you the position of the option and its trend, whereas, if you had a resistance point on time written down, you might mislay it, or forget it, but these angles are always on the chart in front of you.

These angles or moving-average trend lines, correctly drawn, will keep you from making mistakes, or misjudging the trend. If you wait and follow the rules, these angles will show you when the trend changes.

The mean-average, as commonly used, is obtained by taking the extreme low price and the extreme high price of the calendar day, week or month, and dividing it by 2 to get the mean, or average price, for the day, week or month, and continuing this at the end of each time period. This is an irregular movement in spaces, or points, per week because at one time it may move up 2 points per week, and at another, 5 points per week, while the time period is a regular unit. Therefore, geometrical angles, which are really mean-averages, move up or down at a uniform rate from any bottom or top on a daily, weekly or monthly chart.

### HOW TO DRAW GEOMETRICAL ANGLES

There are three important points which we can prove with mathematics or geometry: the Circle, the Square and the Triangle. After I have made the square, I can draw a circle in it using the same diameter, and thereby produce the triangle, the square in the circle.

### HOW TO DRAW GEOMETRICAL ANGLES (Contd.)

The angles, or moving trend line, measure and divide time and price into proportionate parts. Refer to Form 1, where I have drawn the square of 28. You will note that this is 28 high and 28 wide. In other words, 28 up and 28 across. It is the same as a square room which has a bottom or floor, a top or ceiling, and side walls. Everything has width, length and height. 28¢ was the low price for Cash Wheat in 1852.

To get the strongest and most important points in this square I divide it into 2 equal parts by drawing a horizontal and a vertical line. Note angle marked "A" which divides each of the smaller squares into 2 equal parts and runs from 0 to 28 diagonally. This is a diagonal line moving on a 45 degree angle and divides the large square into 2 equal parts. Then, note angle "B" at "14" running horizontally across. This divides the square into 2 equal parts. Note angle "C" which is a vertical line running up from 14, which is  $1/2$  of 28. This crosses at the center or  $1/2$  point at 14 where the other angles cross, dividing the square into 2 equal parts. Then, note angle "D" which forms another 45 degree angle moving from the N.W. corner to the S.E. corner, crossing 14 at the exact  $1/2$  point. You see by this that if we draw the first line through the center of the square, we divide it into 2 equal parts. When we draw the lines from the other directions, we divide it into 4 equal parts. Then, by drawing the 2 lines from each corner, we divide the square into 8 equal parts and produce 8 triangles. We use 28 because 28¢ was the lowest price Cash Wheat ever sold.

As you look at this square, it should be easy for you to tell with your eye where the strongest support point is, or resistance point. It is at the center where all the angles cross. 4 angles cross at this point so, naturally, this would be a stronger support point than a place where only 1 angle crosses. I could divide each one of these smaller squares into 4 or 8 equal parts by drawing angles in the same way. Later, when I give you the rules and examples, I will explain how to square the range of an option, that is, the difference between the extreme low and the extreme high prices, or the difference between any low point and any high point, and also how to square the bottom price.

Example: If the low of Wheat is 28, this square of 28' x 28 would represent squaring the Price by Time, because, if we have 28 points up in price, and we move over 28 spaces in time, we square the price with time. Therefore, when the option has moved over 28 days, 28 weeks or 28 months, it will be squaring its price range of 28.

### PATTERN CHART FOR GEOMETRICAL ANGLES

The square of 90, or the Pattern Chart, shows all the measured angles that are important to use in determining the position of an option.

### PATTERN CHART FOR GEOMETRICAL ANGLES (Contd.)

These angles are as follows:  $3\frac{3}{4}$ ,  $7\frac{1}{2}$ , 15,  $18\frac{3}{4}$ ,  $26\frac{1}{4}$ , 30,  $33\frac{3}{4}$ ,  $37\frac{1}{2}$ , 45,  $52\frac{1}{2}$ ,  $56\frac{1}{4}$ , 60,  $63\frac{3}{4}$ ,  $71\frac{1}{4}$ , 75,  $82\frac{1}{2}$ ,  $86\frac{1}{4}$  and 90 degrees.

It is not necessary to measure these angles with a protractor. All you have to do to get the angles correct is count the spaces on the chart paper, using 8 x 8 to the inch, and draw the lines or angles accordingly.

On the square of 90, which you will receive with these instructions, note how equal angles drawn from the top and from the bottom prove themselves by the point at which they cross. Example: The angles of 8 x 1 from "90" down both cross at 45,  $5\frac{5}{8}$  points over from 0 counting to the right. Then, the angle of 4 x 1 from 0 and the angle of 4 x 1 down from 90, you will notice; cross at  $11\frac{1}{4}$  on 45, equal distance from the other angle and twice the measure. The reason these angles prove this way is because the 45 degree angle, or 45 points or degrees from 0 to 45 is  $\frac{1}{2}$  of 90. Therefore, parallel angles beginning at 0 going up and at 90 coming down, must cross on a 45 degree angle or at the gravity center.

### HOW TO DRAW ANGLES FROM A LOW POINT RECORDED ON GRAIN OPTIONS

An example marked "Form 2" shows you the most important angles to use when Grain is working higher and advancing.

#### First Important Geometrical Angle

$45^{\circ}$  or 1 x 1.

The first and always most important angle to draw is a 45 degree angle or a moving trend line that moves up  $1\phi$

per day,  $1\phi$  per week or  $1\phi$  per month. This is a 45 degree angle because it divides the space and time periods into 2 equal parts. As long as the market or an option stays above the 45 degree angle, it is in a strong position and indicates higher prices. You can buy every time it rests on the 45 degree angle with a stop-loss order  $1\phi$ ,  $2\phi$  or  $3\phi$  under the 45 degree angle, but remember the rule: Never use a stop-loss order more than  $3\phi$  away. Unless Grain options are near the low levels, or just starting in a bull market or selling at very low prices, I always use a stop-loss order  $1\phi$  under the 45 degree angle. If this angle is broken by  $1\phi$ , you will usually find that the trend has changed, at least, temporarily and the option will go lower.

An easy way to calculate accurately how to put on this 45 degree angle is, for example: If the time is 28 days, 28 weeks or 28 months from the price where the option was bottom, then the angle of 45 degrees must be  $28\phi$  up from the bottom and would cross at 28. This is one of the easiest angles to put on and one of the simplest to learn. You can beat the market by trading against the 45 degree angle alone, if you stick to the rule: Wait to buy an option on the 45 degree angle or wait to sell it against the 45 degree angle.



## HOW TO DRAW ANGLES FROM A LOW POINT, etc. (Contd.)

Second Important Angle This is the angle of  $2 \times 1$ , or the moving trend line which moves up at the rate of  $2\%$  per day, week or month. It divides the space between the  $45^\circ$  degree angle and the vertical angle into 2 equal parts and measures  $63\frac{3}{4}^\circ$ . That is why it is the next strongest and most important angle. As long as Grain holds above this angle, it is in a stronger position than when it is resting on a  $45^\circ$  degree angle because it is a more acute angle. When an option breaks under this angle of  $2 \times 1$ , or  $2\%$  for each time period, then it indicates that it will go lower and reach the  $45^\circ$  degree angle. Remember the rule of all angles: No matter what angle the option breaks under, it indicates a decline to the next angle below it.

Third Important Angle Still stronger as long as an option holds above it; the angle which moves up  $4\%$  per day, week or month. This angle is  $4 \times 1$  or 4 points of space or price, equals 1 period of time. It measures  $75^\circ$  and divides the space between the angle of  $2 \times 1$  and the  $90^\circ$  degree angle into 2 equal parts. Any option that continues to advance  $4\%$  per day,  $4\%$  per week or  $4\%$  per month, and remains above this angle, is in a very strong position as long as it stays above it, but when it breaks under, it indicates the next angle or next support point according to the position of the option on time and resistance levels.

Fourth Important Angle The angle of  $8 \times 1$  or the one that moves up  $8\%$  per day, week or month. This angle measures  $82\frac{1}{2}^\circ$ . As long as the option can hold above this angle on daily, weekly or monthly charts, it is in the strongest possible position, but, when it reverses trend and declines below this angle, then it indicates a decline to the next angle.

Fifth Angle It is possible to use an angle of  $16 \times 1$ , or  $16\%$  of price to 1 period of time, which measures  $86\frac{1}{4}^\circ$ , but this angle is only used in fast, advancing markets, like 1947-48, when Grains are moving up or down  $16\%$  or more per week, or month. There are very few options that will move up  $16\%$  per day, week or month, and very seldom.

You will note that with these 4 important angles we show the strong or bullish side of the market. All the time, by dividing the space with angles, we are getting the  $1/2$  point or the gravity center of time and price.

Sixth Angle Note the angle drawn in green marked " $3 \times 1$ " which moves up at the rate of  $3\%$  per day, week or month measuring  $71\frac{1}{4}^\circ$ . This angle is important at times, after markets have had a prolonged advance and are a long distance up from the bottom. It is an important angle to use on monthly and weekly charts.

These are all the angles you need as long as an option continues to advance and work up and stays above the angle of  $45^\circ$

### PATTERN CHART FOR GEOMETRICAL ANGLES (Contd.)

degrees, or the trend line of  $1\frac{1}{2}\%$  per day, week or month.

While there are 360 degrees in a circle, and angles can form at any of these degrees. All of the important angles form between 0 and 90 because 90 is straight up and down and the most acute angle on which price can rise.

Example: The 45 degree angle divides the space from 0 to 90 in half. The angle of 135 degrees is another angle of 45 degrees because it is  $1\frac{1}{2}$  of the next quadrant between 90 and 180. 225 and 315 in a circle are also 45 degree angles. Therefore, all of the angles valuable in determining the trend of Grain are found between 0 and 90 degrees. When we divide 90 degrees by 8 we get the most important angles to use, then divide it by 3 and we get 30 and 60 degree angles, which are important to use for time and resistance points.

### BOTTOMS FROM WHICH TO DRAW ANGLES OR MOVING TREND LINES

Daily Chart: If Grains have been declining for sometime, then start to rally by rallying from a bottom, it must make higher bottoms every day and higher tops. Then, after a 3-day rally on the daily high and low chart, you can put on the 45 degree angle and the angle of  $2 \times 1$  from the bottom or low point. As a rule, it will only be necessary to put on these 2 angles, at first. If this bottom holds and is not broken, then you can put on the other angles from the bottom.

Weekly Chart: If any option is declining and reacts for more than one week and continues down, for 3 weeks or more, then starts to rally and advances 2 weeks or more, you would start to put the angles on from the low point of the decline, only using the angles above the 45 degree angle until the option again breaks under the 45 degree angle. After that, use the other angles on the lower or bearish side of the square.

### WHAT TO DO AFTER THE 45 DEGREE ANGLE FROM BOTTOM IS BROKEN

After an option makes top, either temporary or otherwise, and breaks under the 45 degree angle, and starts moving down, then, the first thing to do is draw angles below the 45 degree angle, starting from the bottom or low point. Note example marked "Form #3."

First Angle on Bear Side of the Square The first angle you draw on the bear side of the square is  $2 \times 1$  or  $2\frac{1}{2}\%$  over and  $1\frac{1}{2}\%$  up which moves at the rate of  $1\frac{1}{2}\%$  per day, week or month, and measures  $26-1\frac{1}{4}^\circ$ . This is the first support angle the option should reach after it breaks under the 45 degree angle. As a general rule, when the price reaches this angle, it will receive support and rally. Sometimes, it will rest on it for a long period of time, holding on this angle and making higher bottoms;

WHAT TO DO AFTER THE 45° ANGLE FROM BOTTOM IS BROKEN (Contd.)<sup>8</sup>

but when this angle of 2 x 1, or moving trend line of 1/2¢ per day, week or month is broken, then you must draw the next angle of 4 x 1.

Second Important Angle    The next important angle on the bear side  
4 x 1    of the square, which moves up at the rate  
of 1/4¢ per day, is the angle of 4 x 1,  
measuring 15°. It will be the next strong support angle from  
which the price should get support and rally.

Third Angle    After the 4 x 1 angle is broken, the next important  
8 x 1    angle you will put on your chart is the angle of  
8 x 1 which moves at the rate of 1/8¢ per day, week  
or month and measures 7-1/2°. This is often a very strong sup-  
port angle. After the option has had a big decline, it will  
often rest on this angle several times or may make final bottom  
and start up from this angle crossing other angles and getting  
back into a strong position again. Therefore, this angle is  
important to use on a monthly or weekly chart after a prolonged  
decline.

Fourth Angle    This angle can be used on a monthly chart after a  
16 x 1    long period of time has elapsed from an important  
bottom. It moves at the rate of 1/16¢ per month  
and measures 3-3/4°.

Fifth Angle    This angle, drawn in red ink, is a very important  
3 x 1    angle measuring 18-3/4°. I strongly advise using  
it at all times and keeping it up on monthly charts  
from any important bottom. It can also be used to advantage at  
times on weekly charts, but is seldom of much value on a daily  
chart. It moves at the rate of 1/3¢ per day, week or month. By  
drawing this on the monthly chart for a long period of year, you  
will soon be convinced of its value and also by testing it on a  
weekly chart, you will find it valuable.

This completes all of the angles you will need to use from  
any bottom, at any time.

HOW TO DRAW ANGLES FROM TOPS ON DAILY, WEEKLY OR MONTHLY CHARTS

Position under 45° Angle drawn from Top: After an option has made  
top and declined for a reasonable length of time, say, 3 days, 3  
weeks or 3 months, breaking previous bottoms, then you start to  
draw angles down from the top. Note example marked "Form #4."  
which is the pattern for drawing angles from the top under the  
45 degree angle.

45° Angle from Top: The first angle you draw is the angle of 45  
degrees, or a moving trend line which indicates a decline of 1¢  
per day, week or month. As long as the option is below this angle  
it is in the weakest position and in a bear market.

Other Angles: In many cases an option will start declining an

# HOW TO DRAW ANGLES FROM TOPS, etc. (Contd.)

## Other Angles (contd.):

average of 8¢ per day, week or month; or 4¢ per day, week or month; 2¢ per day, week or month. Therefore, you should put on all of these angles from the top which moves down faster than the angle of 45 degrees.

Weakest Position: The price of any Grain is in the weakest possible position when it declines and keeps under the angle of 8 x 1. It is in the next weakest position when it is dropping down at the rate of 4¢ per day, week or month, or under the angle of 4 x 1. It is in its next weakest position when it is dropping down under the angle of 2 x 1.

Strongest Position: The price is in a stronger position and indicates a better rally when it crosses the angle of 2 x 1, but this depends on how far it is down from the top and how far the angles are apart, as will be explained later under the rules.

Changing Trend: As long as the price is declining 1¢ per day, week or month, or falling below or under the 45 degree angle, it is still in a bear market and in a very weak position. When the option rallies and crosses the angle of 45 degrees after a prolonged decline, then you are ready to put on the angles on the other side of the 45 degree angle which shows that the price is in a stronger position in a bear market, and may be getting ready to change into a bull market.

## POSITION ABOVE THE 45° ANGLE DRAWN FROM TOP

(Refer to Form #5 which is the pattern for drawing angles above the 45 degree angle from the top.)

2 x 1 Angle from Top: The first angle or moving trend line to draw, after the 45 degree angle from the top is crossed, and after the option indicates that it has made a temporary bottom, is the angle of 2 x 1 moving over 2¢ and down 1¢, or 1/2¢ per unit of time. This is moving down at the rate of 1/2¢ per month, week or day.

4 x 1 Angle: The next is the angle of 4 x 1 which moves down at the rate of 1/4¢ per day, week or month.

8 x 1 Angle: The next angle is the angle of 8 x 1 which moves down at the rate of 1¢ every 8 days, 8 weeks or 8 months; or 1/8¢ per time period.

Strong Position: After the price has crossed the angle of 45 degrees and rallied up to the angle of 2 x 1, it will meet selling and react to some angle coming up from the bottom of the last move, but it is in a stronger position when it holds above this angle of 2 x 1 and is in the next strongest position when it crosses the angle of 4 x 1. Crossing the angle of 8 x 1, which is of least importance, it indicates it is in a very strong position again from the top. You must always consider a movement coming up from bottom and its position on angles from the

10.

POSITION ABOVE THE 45° ANGLE DRAWN FROM TOP (Contd.)

8 x 1 Angle (contd.):

bottom to determine its strength. It is important to consider the number of cents it has moved up from the bottom and how many cents it is down from the top.

3 x 1 Angle: The angle of 3 x 1, drawn in red ink on Form #5, moves down at the rate of 1¢ every 3 days; 3 weeks or 3 months; or 1/3¢ per day, week or month. This angle is important to use after prolonged declines.

This completes the forms of all the angles that you will need to use at any time from tops or bottoms. Practice putting these angles on tops and bottoms until you thoroughly understand how to do them, and know that you are getting them absolutely accurate. Then, you can begin to study the rules for determining the trend according to the position of the price on angles.

DOUBLE AND TRIPLE TOPS OR BOTTOMS

Angles Crossing Each Other: When there is a double bottom several days, weeks or months apart, you draw angles from these bottoms which are near the same price level. Example: From the first bottom draw a 45 degree angle and from the second bottom draw an angle of 2 x 1. When these angles cross each other it will be an important point for a change in trend. Note on chart marked "Form #6" that I have drawn the 45 degree angle from the first bottom "1B" and the angle of 2 x 1 on the right hand side of the 45 degree angle. Then, from the second bottom "2B", I have drawn a 45 degree angle and the angle of 2 x 1 which gains 2¢ per day, week or month, on the left hand side or bull side of the 45 degree angle. You will note that the angle of 2 x 1 from the second bottom crosses the angle of 2 x 1 on the bear side from the first bottom at 48, and that when the price breaks under these angles, a change in trend takes place and it goes lower.

Note that the angle of 2 x 1 from the third bottom "3B" crossed the angle of 2 x 1 on the bear side from the first bottom at 53-1/2, and crosses the 45 degree angle from the second bottom at 8. This would be a point to watch for change in trend. I have placed a circle where these angles from the different bottoms come together.

Apply this rule to double tops and triple tops in the same way. It is not necessary for the tops or bottoms to be exactly at the same price level, but near the same level. Remember, always draw 45 degree angles from all important tops and bottoms.

PARALLEL ANGLES

Parallel angles or lines run from important tops and bottoms. As previously explained, the 45 degree angle is the most important and should be drawn from all important tops and bottoms. If an option starts advancing, we draw a 45 degree angle

PARALLEL ANGLES (Contd.)

from the bottom. Then, if the option makes tops, declines and makes a higher bottom, advances and makes a higher top, draw a 45 degree angle from the first top, running the line up. This will give the oscillation or width of fluctuation in a parallel between the 45 degree angle from the bottom and the 45 degree angle running up from the top. Often an option will advance to the 45 degree angle from the first top, fail to cross it, then decline and rest on the 45 degree angle from the first bottom. Advance again working up for a prolonged bull campaign between these parallel angles.

When the angles are very far apart, you can draw another 45 degree angle equal distance between them which is often a strong support angle from which the option will rally, but when it breaks under, it declines to the bottom parallel.

Parallels can form between the angles of 2 x 1 or 4 x 1 just the same as between 45 degree angles, which often occurs in a slow moving market.

GEOMETRICAL ANGLES OF MOVING TREND LINES DRAWN FROM "0"

When the price reaches bottom and starts up, you have been instructed to draw angles from this exact low point which shows the support in time periods, but there are other angles that later on will be just as important and sometimes more important than the angles drawn from the bottom. These are the angles that begin at "0" or zero, and move up at the same rate they move up from the bottom. The starting point must be on the same line that the bottom is made on, as the time period begins from this bottom, but the angles move up from 0. These angles should be started every time an option makes a bottom, especially on weekly and monthly charts, and should also be carried up on important movements on the daily chart. Example: See chart marked "Form #7."

If an option makes low at 20, as shown on the chart, starting the 45 degree angle from 0, when will this angle reach 20? Answer: It will reach 20 in 20 days, 20 weeks or 20 months from the bottom or its starting point. In other words, in 20 days, 20 weeks or 20 months, it will be up 20 from 0, and at the price where the option made bottom. Then, the angle will continue on up at the same rate, and later, when the price breaks under the 45 degree angle from the actual bottom made at 20, and breaks the other support angles drawn from the actual bottom at 20, the next important point for support will be the angle of 45 degrees moving up from 0. When this angle is broken, it is in the weakest possible position, and indicates much lower prices, but this depends on how high the option is selling and how much it has declined at the time it breaks the 45 degree angle from 0. These angles drawn from 0 especially the 45 degree angle, proves when price and time are balancing, or when the price is squaring out from its bottom.

### "O" ANGLES STARTING AT THE TIME TOP IS MADE

When an option reaches extreme top on a daily, weekly or monthly chart, and the trend turns down, you should start an angle of 45 degrees from O moving up from the exact space and date that the top is made. This will prove the square of the time period. It is very important when this angle is reached and indicates a change in trend. It is the last strong support and when broken, it will indicate much lower prices.

I have instructed you in each case to first draw the 45 degree angle from the bottom, top and O at bottom and top, but this does not mean that you must not use the other angles. All of the other angles can be used from O, but the 45 degree ANGLE IS THE FIRST AND MOST IMPORTANT. After this angle is broken, you can use the other angles. It is not necessary to carry all of them along until you need them, but on the monthly chart, after a long series of years, these other angles should be carried along when the price begins to approach the levels where they would be broken, or where the price would rest on them and receive support.

45 Degree Angle From "O" to Top and Bottom: When a 45 degree angle moving up from O reaches the line or price of the bottom, it is very important. Then, again when it reaches the point of the extreme high price, it is very important for a change in trend.

You should carry 45 degree angles and other angles up from O from all important 1st, 2nd and 3rd higher bottoms, especially those where very much time has elapsed between these bottoms. You should also start the angle of 45 degrees up from O from the 1st, 2nd and 3rd lower tops, especially those which show much time period elapsed. These angles are the most important to be carried on the weekly and monthly charts.

Never overlook keeping up the angles from O because they will tell you when time is squaring out with price from tops and bottoms, and will locate support angles or moving trend lines at a point on the bear side, after the first 45 degree angle from a bottom is broken. You could not locate this support point in any other way except by the angles from O.

You should go back over past records and bring up these angles and square out different tops and bottoms so that you can prove to yourself the great value of using these angles.

### ANGLES FROM TOPS DOWN TO "O" AND UP AGAIN

A 45 degree angle starting down from any important top on a monthly or weekly chart should be continued down until it reaches O, and then, started up again at the same rate. After a long number of years, between important tops and bottoms, this angle coming down and going up again is important. A 45 degree angle can also be continued down from any important bottom to O, and then started up again. This will show the squaring of price with time from either top or bottom. Also, some

### ANGLES FROM TOPS DOWN TO "O" AND UP AGAIN (Contd.)

angles can be moved to base on lowest price, and then up again.

### TWO 45° ANGLES FROM THE SAME BOTTOM

As we have previously explained, the 45 degree angle moves up at the rate of 1¢ per month and moves down at the rate of 1¢ per month. Refer to example on chart #8.

You will note that the low on this chart is shown as 52 and the price moves up to a high of 63. A 45 degree angle is drawn up from the bottom, and after the price reaches top and starts to work down, it breaks the 45 degree angle getting under it at a price of 59. You will note that I have drawn another 45 degree angle down from the bottom at 52. At the point where the price breaks under the 45 degree angle moving up from 52 to the 45 degree angle moving down from 52, the distance in points is 16. Therefore, the angles have widened until the price could decline 16¢, if it went straight down, before it reached the 45 degree angle moving down from the bottom.

Note that I have shown on the chart that the price continues down until it reaches 40, where it rests on the 45 degree angle from the bottom at 52. This would indicate the strongest support point and at least a temporary rally, especially as the price is down 23 points from the top. Later, you will find under "Resistance Levels," that 22-1/2¢ to 24¢ is a strong support point.

This shows that when an option gets into a very weak position by dropping under important angles moving down from bottoms, after having broken strong angles moving up from bottoms, it can decline to very low levels. These extreme fluctuations and declines have happened in the past and will happen again in the future. This proves the squaring out of time on the down side or the balancing up of Price and Time.

### ANGLES OR MOVING TREND LINES FROM TOP TO THE NEXT TOP. (Refer to example on Form #9.)

You will see that we have started the bottom at 60. The option advances 6 months to 74, to a point marked "T" and makes top, reacts for 3 months to 64 breaking the 45 degree angle but resting on the angle of 2 x 1 from the bottom, then starts advancing and finally crosses again the 45 degree angle from 60, getting into a stronger position, having regained this angle. In order to determine where it might meet resistance, as it is in new high territory, we draw a 45 degree angle from the top at 74. The price advances to 90 on the 22nd month from the bottom, striking the 45 degree angle from the first top at 74, on the 16th month from the 1st top. Being 16 points up above the 1st top, the time equals the advance in the price above the 1st top. The 45 degree angle shows that this is a strong resistance point and a place to go short with stop 1 to 3 points above the 45 degree



14.

ANGLES OR MOVING TREND LINES FROM TOP TO THE NEXT TOP (Contd.)

angle. A decline starts and in the 3rd month the price again breaks under the 45 degree angle from the bottom (at 60) at a very high level. In other words, it is 24¢ up from the bottom and is now in a much weaker position because it is so far from the base of support, and indicates a decline again to the angle of 2 x 1 (marked in green).

Don't overlook this rule: After an option has advanced to a new high level, then declines to the old top at 74, this may be a support point unless it breaks 3¢ under it. If it does, and also breaks the angle of 2 x 1, it will be in a weaker position and the next point to watch for support and a rally would be the next bottom at 64.

ANGLES FROM BOTTOM OF FIRST SHARP DECLINE

When an option that has been advancing for sometime makes top and holds for several days, several weeks or several months, then, turns the trend down and has a sharp, severe decline, there is always a rally after this first decline. It usually makes a lower top on this secondary rally and then starts to work lower again. The bottom of the first decline is a very important point from which to draw angles especially the 45 degree angle moving down, as I have done on the chart marked "Form #10."

This chart shows the price rallying up to around 75, where the 45 degree angle coming up from the last bottom crosses the angle of 2 x 1 coming down from the top. Then the decline started and at 66 the price broke back under the angle of 45 degrees from the top, which put it in a very weak position. It declined to the angle of 45 degrees coming down from the bottom of the first sharp decline. This would be the squaring out of time from the bottom and would be a place to buy for a rally. An option will often decline and drop a little below this angle from the bottom. Then, if it holds for several days or weeks under this angle, or on it, it is a place to buy for a rally.

On a monthly chart always carry this angle down from the bottom of the first sharp decline, as it often becomes very important later on in a campaign.

After an option has been advancing for sometime and then has a sharp break lasting 2 to 3 days, 2 to 3 weeks or 2 to 3 months, then rallies and afterward breaks under the lows of this first sharp break, indicates that the main trend has turned down and that it is going lower.

Apply the same rule when any Grain has been declining for a long time and then makes a sharp, quick recovery for 2 to 3 days, 2 to 3 weeks or 2 to 3 months, then reacts and crosses this first rally point that it made, an indication of higher prices.

### LAST SWING IN A BULL OR BEAR MARKET

It is important to draw angles from the price the market starts up, and makes its last run, in a bull market. Refer to Chart #11.

In this example note point marked "last bottom." In the last section of the bull market a fast advance follows to a price of 84. We have drawn the angle of 2 x 1 (a gain of 2¢ per day, week or month) and the 45 degree angle from this bottom. When the angle of 2 x 1 was broken, it indicated the trend had turned down. The market declined and rested on the 45 degree angle, then rallied and made a second lower top, then broke the 45 degree angle, declined sharply and rested on the 45 degree angle drawn from the top at 84, which indicated that time and price had squared out or were equal. This would be a buying level with a stop-loss order 2¢ to 3¢ under this angle for a rally back to the angle of 2 x 1 from the top, as shown on the chart.

In a very active fast-moving market the price may stay above the angle of 4 x 1 or the angle of 8 x 1 from the "last bottom," but on the daily or weekly chart, after this first acute angle is broken, it indicates that the trend has turned down.

Always remember that after a prolonged advance, when the main trend turns down, it is safer to wait for rallies and sell short than to buy against the trend.

All of these rules are reversed at the end of a bear market or sharp decline. It is important to note when the market starts down from the last top or rally, and makes its last run to bottom. Draw the angles from this last top and watch when the market reaches these important angles and crosses them.

After an option has been advancing for along time, in the last run when there is a lot of momentum, it may cross angles from previous tops or bottoms, then fall back under them which is an indication of weakness. When an option has a sharp decline and is making bottom, it will drop under important angles and then recover quickly getting above them, which shows that it is getting into a strong position and changing trend.

### ANGLES FROM HIGHER BOTTOMS AND LOWER TOPS

What rule should be followed when Grain makes higher bottoms and lower tops?

As prices advance and make higher bottoms on the monthly, weekly or daily chart, you should always draw angles from higher bottoms. Then, in the last section of a bull market, if these important angles are broken from the last bottom, you know that the trend has turned down.

Apply this same rule as a market declines. Draw the angles from each lower top and watch the angles until the price again

### ANGLES FROM HIGHER BOTTOMS AND LOWER TOPS (Contd.)

crosses the 45 degree angle from a 2nd, 3rd or 4th lower top. The 2nd lower top or 2nd higher bottom is always very important from which to draw angles and to measure time from as well.

### SECTIONS OF MARKET CAMPAIGNS

All market campaigns, up or down, move in 3 to 4 sections. When an advance starts the market runs for several weeks or several months and then halts for several weeks or months, moving up and down over a range of 10¢ to 20¢ or more according to the price of the option, then the advance is resumed and the price crosses the high level of the 1st section, moves higher, halts again, and reacts for a period of time; then, crosses the top of the 2nd section and moves up again for another period of time and halts for the 3rd time, which is a very important point to watch as markets often culminate at the end of the 3rd section and a greater decline follows.

Most markets run out in 3 important sections or campaigns. However, after resting and reacting, if the price crosses the 3rd top, it will then move up to the top of the 4th section. This 4th advance may be a shorter period of time than the previous section, or, in some cases, may consume a greater period of time especially if the option is very active and high-priced. This 4th top is very important and generally marks a culmination and a reversal for a greater decline.

Reverse this rule in a bear market. Watch the action of the market when it makes the 3rd and 4th decline. But, remember, in a bear market, when rallies come, they may make only 1 section or 1 move, or, in extreme cases, only make the 2nd section, then reverse and follow the main trend down.

You will find it very helpful to study and watch these various section of a campaign and, by applying the angles from tops and bottoms, you can detect the first minor and major changes in trend.

### STRENGTH OR WEAKNESS DENOTED BY POSITION ON ANGLES

The angles on the monthly and weekly charts are of greater importance than those on the daily chart because the daily trend can change quite often, while only the major changes are shown according to the angles on the monthly and weekly charts.

Always consider the distance an option is from its beginning price when it breaks any important angle or crosses any important angle. The further away from the beginning price, the more important the change in trend, whether this is crossing angles from the top or breaking under an angle from the bottom.

### When an Option is in the Weakest Position

An option is in the weakest position when it has completed

#### When an Option is in the Weakest Position (contd.)

distribution and broken under a 45 degree angle from an important bottom on the weekly or monthly chart. It is also in the weakest position when it has broken under the 1/2 point between any important top or bottom. The longer the time period has run and the higher the price, the weaker the position. Example: (Refer to 2-day and weekly chart on May Beans, 1947-48).

If an option has advanced to 150 and has only moved down 25¢ when the 45 degree angle from an extreme low on a weekly or monthly chart is broken, then it is in a very weak position because it is so far above the 1/2 point on its price movement, already having squared out the time period with price.

Weakness in price develops when it breaks the 3/4 point, the 2/3 point, the 1/2 point, etc., but the position on the timing angles from the bottom tells you still more about the weak position.

An option shows its first weakness when it breaks the first important angle coming up from the last bottom in the final run in a bull market.

#### When an Option is in the Strongest Position

An option is always in the strongest position coming up from a bottom when it is holding above the very acute angles on the daily, weekly or monthly charts especially on monthly and weekly charts.

As long as the option holds above the angle of 2 x 1 (a gain of 2¢ per day) on the daily chart, it is in a very strong position, as far as the bottom is concerned. In fact, it is always in a strong position on the daily as long as it holds above the 45 degree angle. The same applies to weekly and monthly charts which are the most important trend indicators.

I have found that the Grains which have the greatest advances are those that always hold above the angle of 2 x 1 on the monthly chart. or gain 2¢ per month for a long period of time. I have seen prices rest 10 or 15 times on the angle of 2 x 1, and never break it until they have advanced 100¢ or more. In this way, the price stays ahead of time and stays within the square of time by being far above the angle of 45 degrees, and therefore is in a very strong position. But, the time must come when the cycle has run out and the main trend begins to change from a bull market to a bear market -- when the breaking of the angle from the last bottom shows a change in trend.

Another indication that an option is in a strong position is when it advances and moves up above the 1/2 point of the previous price movement, and then holds the 1/2 point, that is, advances above it and then reacts and fails to break under. This is just the same as resting on a 45 degree angle and indicates a very strong position.

### Strongest Buying and Selling Points

The safest buying point is when the price rests on a 45 degree angle, placing a stop-loss order below it.

Another point to buy is on the 1/2 point of the price movement, placing a stop-loss order under the 1/2 point.

When the main trend is up, it is also safe to buy, when the option reacts to the angle of 2 x 1 (a gain of 2¢ per time period) on the weekly or monthly chart.

### Regaining Angles or Crossing Lines

Remember, when any option breaks under the 45 degree angle from the extreme low price of a move on the daily, weekly or monthly chart, it is then in a very weak position and indicates a decline to the next angle. However, when an option can regain the 45 degree angle, it is in a stronger position.

The same rule applies to a 45 degree angle drawn up from any top. When the option crosses the angle on the daily, weekly or monthly, and stays above the 45 degree angle or any other angle to the left of the 45 degree angle, it is in a very strong position.

After the price once drops below or gets above any important angle, and then reverses its position by getting back above the angle or dropping back below it, it changes the trend again.

### WHEN GRAIN IS IN A STRONG POSITION FROM BOTTOM AND IN A WEAK POSITION FROM TOP.

An option is in a strong position from the bottom when it is keeping above the angle of 45 degrees, or the angle of 2 x 1, but at the same time it can be in a weak position when it rallies up and strikes against a 45 degree angle, or the angle of 2 x 1 coming down from the top, then it is a short sale until it can cross these angles or cross previous tops. When it breaks the angles from the bottom, it is in a weak position and indicates lower.

An option can be in a strong position from the top and in a weak position from the bottom, that is, it may cross some important angles from the top after a long period of time, but at the same time may break under the 2 x 1 angle or 45 degree angle from the bottom, which would indicate that it is in a weak position and getting ready to go lower.

### When Angles from Extreme Top are Crossed

The 45 degree angle, drawn from the extreme high price of an option is most important and when it is crossed, a major move may be expected.

### QUICK CALCULATION OF ANGLES

It is not necessary to draw these angles from a price a long way back. You can make the calculations and determine where they cross. Example: Suppose, in January, 1951, you wish to get the 45 degree angle from June, 1950, when Soy Beans were high at 216. This will make 247 months to January, 1951, and the 45 degree angle, moving up from zero, will be at the price of 247; therefore, you start the 45 degree angle at 247 and move it up  $1\frac{1}{2}$  per month until the price declines below it.

1920, February 15, Soy Beans high, 405. This was the highest in history until 1947. To get the angle and time period to February 15, 1951, will be 31 years or 372 months and the 45 degree angle moving up from 0 will cross at 372. The 45 degree angle moving down from 405 will cross at 33. February, 1953, will be 396 months from 1920, and November 14, 1953, will be 405 months, which equals the highest price; and the 45 degree angle moving down from the top will reach 0. Time and price will have squared out on the monthly chart making November, 1953, a very important period for a change in trend.

### LATITUDE AND LONGITUDE

On all charts -- daily, weekly or monthly -- the price must move up or down on the vertical angles. Therefore, the price movement is the same as latitude. You should begin with 0 on any chart -- daily, weekly or monthly -- and draw the important angles and resistance levels across which measures latitude.

Next, number the time points in days, weeks or months across and draw the horizontal angle at each important natural angle, such as,  $11\frac{1}{2}$ ,  $22\frac{1}{2}$ ,  $33\frac{3}{4}$ , 45,  $56\frac{1}{2}$ ,  $67\frac{1}{2}$ ,  $78\frac{3}{4}$ , 90,  $101\frac{1}{2}$ ,  $112\frac{1}{2}$ , 120, etc. Then, you will know when price reaches these important angles and meets resistance.

Longitude measures the time running across the chart, as it moves over each day, week or month. Therefore, you must keep your chart numbered from each important top and bottom in order to get the time measurements, according to angles. These important angles, such as,  $11\frac{1}{2}$ ,  $22\frac{1}{2}$ ,  $33\frac{3}{4}$ , 45,  $56\frac{1}{2}$ , 60,  $78\frac{3}{4}$ , 90, etc., from each bottom and top will show you where the strongest resistance in price and time takes place. These angles prove the parallel or crossing point. Study past records and see what has happened when prices on monthly charts reached these important angles or time periods.

Example: 90 points up in price from 0, draw an angle horizontally across the chart. Then, 90 days, weeks or months, going to the right across the chart, draw a vertical angle up which will cross the horizontal angle at 90 and prove the square. By keeping all these angles up and understanding them on your charts, you will know when important time cycles are running out.

## LATITUDE AND LONGITUDE (Contd.)

If the price of an option at 60 comes out on the 60th day, week or month, it will meet strong resistance because it has reached the square of price with time. It is at the same latitude or price, and the same longitude or time period. You can always put the square of 90 on a chart, either daily, weekly or monthly, and use the natural angles, but I advise only using this on the weekly and monthly. You can begin this square of 90 from any bottom or top, that is, going up 90 points or from the natural points which are 90, 135, and 180, but you must not fail to square the extreme low and high price, as well as the 2nd and 3rd lower tops and higher bottoms with time.

### RULE FOR KEEPING TIME PERIODS ON CHARTS

It is very important that you keep the time periods on all of your charts, carrying them across from the bottom and top of each important move, in order to check up and know that you have your angles or moving trend lines at the correct point, and to see where major and minor cycles indicate changes in trend.

#### Time Periods from Bottoms

When an option makes bottom one month and then the following month makes a higher bottom and a higher top, or anyway, after it makes a higher bottom and rallies for one month or more, you can start numbering from that bottom. The month that it makes the low belongs to the old or downward movement and is the last move down. Count the first month up as 1, and then number across on the 1/2" squares running them across, adding 4 each time.

Example: If an option has made bottom and advanced 50¢, and you look down at the bottom of the chart and find that the price is on the 25th month, then the angle of 2 x 1, moving up 2¢ per month would cross at 50, while the 45 degree angle moving up 1¢ per month would be at 25; and if the price broke back under 50 the following month, it would be falling under the angle of 2 x 1 and indicate a further decline. If you had an error on the chart in the timing or numbering across from the bottom, the moving trend line or angle would not come out correctly.

#### Time Periods from Tops

After an option has advanced and made an extreme high and reacted for a few days, a few weeks or a few months, and you start putting on the angles from the top down, you must then begin to number the time periods across from the top. Apply the same rule for the top: The month, week or day that the option makes extreme high finishes the upward movement and is not to be counted. You can count the number of days, weeks or months moving across after that allowing the top month to be 0, the next month, week or day over to be 1, adding 4 across on the squares to get the correct position. If this time period is

### Time Periods from Tops (Contd.)

carried across on all the charts correctly, then you can always check up and find out if you have made any mistake in bringing down the angles or moving trend lines.

This is a simple way to always know when the angles or moving trend lines are correct because you simply add the movement to the bottom and subtract it from the top. Suppose the price referred to above, when the price has declined 75¢ was 150, then subtracting 80 from the top at 150, the angle would cross at 70 and the price of the option down 75¢ would be at 75. Therefore, it would be above the angle of 2 x 1 from the top and in position for a rally if the time cycle indicated it.

### Points from which to number Time Periods

The most important point on the monthly high and low chart to carry the time period is from the extreme low of the life of an option. From the extreme low price, the time period should always be carried across on the chart just the same as the important angles should be continued right along for years.

The next important point to number from is a 2nd or 3rd higher bottom, but you should not consider a bottom established until the market has held up or advanced 3 or 4 months, then commence numbering from that bottom, if it appears to be important.

Use this same rule at tops. After top is reached and the trend turns down, carry the time numbers across from the top; but after any top is crossed or bottom is broken, that you are numbering from, do not count that top or bottom of importance to number from except to determine a time period on another cycle 3, 5, 7, 10 or 20 years ahead. Tops that stay for a long time without being crossed are always the most important from which to carry the time periods. The extreme high reached by an option is always most important until that high is crossed. Then, the next high price made on a secondary rally, which is always a lower top, is the next most important top from which to number.

Always note the number of months between extreme high and between extreme low points, and note what angle the tops and bottoms come out on.

### Squaring the Price Range with Time

This is one of the most important and valuable discoveries I have ever made, and if you stick strictly to the rule, and always watch an option when Price is Squared by Time, or when Time and Price come together, you will be able to forecast the important changes in trend with greater accuracy.

The Squaring of Price with Time means an equal number of points up or down balancing an equal number of time periods, either days, weeks or months. Example: If an option has



### Squaring the Price Range with Time (Contd.)

advanced  $24\frac{1}{2}$  in 24 days, then moving the 45 degree angle or moving trend line up at the rate of  $1\frac{1}{2}$  per day, the timing line or time period and the price of the option are at the same level, and the price is resting on a 45 degree angle. You should watch for an important change in trend at this point!

If an option is to continue up-trend and remain in a strong position, it must continue to advance and keep above the angle of 45 degrees. If it breaks back under this angle, then it is out of its square on the bear side of the 45 degree angle and in a weaker position. When you are squaring out time on a daily chart, look at the weekly high and low chart, and monthly high and low chart, and see if the option is in a strong position and has yet to run out the time periods because on a daily chart it has to react and then recover a position, squaring its price many times as long as the weekly and monthly charts point up. Market corrections or reactions are simply the squaring out of minor time periods and later the big declines or advances are the squaring out of major time periods.

### Squaring the Range

Refer to Form #12, where a range of 12 points is shown from 58 low to 60 high. Now, suppose an option remains for several weeks or several months moving up or down in this range, never getting more than 12 points up from the bottom and not breaking the bottom, start the 45 degree angle from the bottom of 48 and move it up to the top of the range to 60, then, when we see the option is holding this range and not going higher, move the 45 degree angle back to the bottom; then, back to the top of the range again moving it up or down over this range until the price breaks out into new low levels or new high levels. You will find that every time the 45 degree angle reaches the top of this range, or the bottom, there is some important change in the trend of the option.

1949, Feb. 9, May Soy Beans low,  $201\frac{1}{2}$  To square this price with time on the weekly chart will require  $201\frac{1}{2}$  weeks, and the 45 degree angle moving up from  $201\frac{1}{2}$  will be at 403, but the 45 degree angle moving up from 0 will be at  $201\frac{1}{2}$  equalling the price.

The  $1/8$ ,  $1/4$ ,  $3/8$ ,  $1/2$  and other parts of  $201\frac{1}{2}$  must be watched in periods of time from  $201\frac{1}{2}$ .  $1/8$  was  $25\frac{1}{2}$  weeks or Aug. 6, 1949;  $1/4$  was Feb. 4, 1950;  $1/2$  was 101 weeks or Jan. 20, 1951. May and November Beans made high February 8, 1951, and the trend turned down.

1951, December 29, will be 150 weeks from February 9, 1949, and this is  $3/4$  of  $201\frac{1}{2}$ , and is a very important date for a change in trend.

1952, January 15, will be 4 years from 1948, high 436- $3/4$ , also important to watch for a change in trend.

### Squaring the Range (Contd.)

1953, Dec. 29, will be 202 weeks from Feb. 9, 1949, and this will square the price of 201½ with time. Watch this date for an important change in trend.

You can also use the angles of 2 x 1 to the right of the 45 degree angle and the 2 x 1 to the left, as they again divide the time period into 2 equal parts and are of some value.

If an option finally moves out of this range on the up side, then the angles would begin at the new and higher bottom and move up, but from the point where the price went into new high, or from any important bottom made while it was in the range especially the last bottom that it made, would be most important. You should then begin an angle at that bottom and continue on up again. Watch when this angle is broken or when time is squared out again with price which would be important for another change in trend, either major or minor.

### Three Ways to Square Time and Price

We can square the range, that is, the number of cents from extreme low to extreme high with time; then square the extreme low price with time; and square the extreme high price with time. When the market passes out of these squares and breaks important angles, the trend changes up or down.

1. The range that any option makes between extreme high and extreme low can be squared, so long as it remains in the same price range. If the range is 25¢, it squares with 25 periods of time -- days, weeks or months. Continue to use this time period as long as it stays in the same range.
2. Squaring Time with Bottom or Extreme Low Price - The next important price to square with time is the lowest price or bottom of any important decline. Example: ~~at the bottom of an~~ option is 25, then at the end of 25 days, 25 weeks or 25 months time and price are equal. Watch for a change in trend as based on its bottom or lowest selling price. As long as the option continues to hold one bottom and advances, you can always use this time period running across and continuing the time period, noting every time it passes out of the square. Watch especially when the price reaches the 3rd square, the 4th square, and again the 7th and 9th squares of its time period. These squares only occur frequently on the daily or weekly charts, as the monthly in most cases, would move out of a range, up or down, before it squared a bottom as many as 7 or 9 times. However, this does sometimes happen when an option is in a narrow range for many years.

Example: May Beans, 1939, July 27 - low 67. This would require 67 months or 67 weeks to square the lowest price. Note monthly chart marked "Squares of 44 and 67."

3. Squaring Time with Top or Extreme High Price - The other important price with which to square time is the extreme high price of an option. The time period must be carried across from the high of the daily, weekly or monthly, and the square of the top price in time must be noted and watched for a change in trend. If the top of an option is 50 then, when it has moved over 50 days, 50 weeks or 50 months, it has reached its square in time and an important change is indicated. This can be determined by the position of the angles from top and bottom. Example: May Soy Beans, 1948, Jan. 15 - high 436-3/4. This requires 436-3/4 weeks to Square Price with Time.

Both major and minor tops and bottoms on all time periods must be watched as they square out right along. Most important of all is the extreme high price on the monthly high and low chart. This may be very high and work out a long time period before it squares the top, in which case you have to divide the price into 8 equal time periods and watch the most important points like 1/4, 1/3, 1/2, and 3/4, but most important of all is when Time equals Price.

When you are watching the position of an option, after it has squared out from a bottom or a top, always look up the time period and the angles from the opposite direction. If the market is nearing a low price, squaring out a top, see how its relation is to the bottom as it might be in the 2nd or 3rd square period from the bottom which would be a double indication for a change in trend.

#### Squaring Weekly Time Periods

The year contains 52 weeks and the square of this in time is 52 by 52. Therefore, you can make up a square of 52 wide and 52 high; put on all of the angles from 0; then, chart weekly high and low prices of an option in this square. Example: If the low price of an option is 50, then the top of this weekly square would be 52 added to 50, which makes 102 as top of the square. As long as the price stays above 50 and moves up, it will be working in the weekly square of 52. On the other hand, if the option makes top and works down, you would make up a weekly square 52 down from the top and 52 over to get the time period.

You can take the past movement of any option, put on a square of 52 x 52, and study the movement noting 13 weeks or 1/4, 26 weeks or 1/2, and 39 weeks or 3/4 points on time; and the changes in trend which take place when the price reaches these important resistance points in time and price. You would watch for a change in trend around these time periods.

#### Squaring Monthly Time Periods

At the time an option breaks a 45 degree angle, if it is selling at 135 on the 135th month, it is breaking a doubly strong resistance level -- a strong angle and a natural resistance level.

### Squaring Monthly Time Periods: (Contd.)

This would be time and space for balancing at resistance levels or geometrical angles and would indicate a big decline to follow. Reverse this rule at the end of a bear campaign.

On a monthly chart, 12 months complete a year. Therefore, the square of 12 is very important for working out time periods on the monthly chart. The square of 12 is 144 and important changes often occur on even 12 months' periods from a bottom or top of an option. It will help, if you use the resistance levels on prices of the even 12's, noting 24, 36, 48, 60, 72, 84, 96, 108, etc. Watch how the option acts on angles when it reaches these important resistance points in price.

### PRICE AHEAD OF TIME

Why do Grain options often cross the 45 degree angle on the daily, weekly or monthly chart, then have an advance for a short period of time, decline and rest on the same 45 degree angle?

Because; when the price crosses the 45 degree angle the first time, it has not run out or overcome the square of time with price. Therefore, on the secondary reaction, when it rests on the 45 degree angle, it is at a time when the price has reached the square of price in time. After that, a greater advance follows.

Reverse this rule at the top of a bull market. When an option breaks under the 45 degree angle, a long distance from the base or bottom, it is most important. Many times an option will rest on the 45 degree angle in the early stages of an advance, then later, on a reaction, rest on it again; then have a prolonged advance, react and rest on the 45 degree angle again, and then advance to a higher level; break the 45 degree angle the next time, which places it in an extremely weak position because it is so far away from the base and so much time has elapsed since the price made low. Don't forget: It is most important when angles are broken on the monthly and weekly charts.

This accounts for Grains that have a sharp, quick decline from the top and then advance and make a slightly higher top or a series of slightly lower tops, and work over until they overcome the square of the price range at a comparatively high level and break the 45 degree angle, then a fast decline follows.

### STRONGEST ANGLES FOR MEASURING TIME AND PRICE

90° ANGLE - Why is the 90° angle the strongest angle of all?  
Because it is vertical or straight up and down.

180° ANGLE - What is the next strongest angle to the 90° angle?  
The 180° angle because it is square to the 90° angle being 90° from the 90° angle.

# STRONGEST ANGLES FOR MEASURING TIME AND PRICE (Contd.)

26.

270° ANGLE - What is the next strongest angle to the 180° angle?  
The 270° angle because it is in opposition to 90 or 180°, from the 90° angle which equals 1/2 of the circle, the strongest point. 270 months equals 22½ years, which is 1/2 of 45.

360° ANGLE - What is the next strongest angle after 270°?  
It is 360° because it ends the circle and returns to the beginning degree, and is opposite 180° or the angle which equals 1/2 of the circle.

120° and 240°  
ANGLES - What angles are next strongest to 90°, 180°, 270° and 360°?  
120° and 240° angles because they are 1/3 and 2/3 of the circle. 120° is 90° plus 30, which is 1/3 of 90°. 240° is 180° plus 1/3 or 60 which makes these strong angles especially strong for measurements of time.

45°, 135°, 225° & 315°  
What angles are next in strength?  
ANGLES 45° angle because it is 1/2 of 90°  
135° " " " " 90 plus 45°  
225° " " " " 45 " 180°  
315° " " " " 45 from 270°  
The angle of 225° is 180° from 45 and the angle of 315° is 180° from 135°.

CARDINAL - The angles of 90°, 180°, 270° and 360° form the  
FIXED CROSS first important cross, known as the Cardinal Cross.  
The angles of 45°, 135°, 225° and 315° form the next important cross, which is known as the Fixed Cross.  
These angles are very important for the measurements of time and space, or price and volume.

22½°, 67½°  
and 78¾°  
- Why is the angle of 22½° stronger than 11¼°?  
Because it is twice as much -- the same reason that a 45° angle is stronger than a 22½° angle. Again, the angle of 67½° is 1½ x 45, therefore, quite strong when anything is moving up toward 90°.  
78¾° is stronger than 67½° because it is 7/8 of 90° and, therefore, one of the strongest points before 90 is reached -- important to watch on time, price and volume. Many Grains have important moves and make tops or bottoms around the 78th to 80th day, week or month, but don't overlook 84 months or 7 years -- a strong time cycle.

STRONGEST ANGLES FOR MEASURING TIME AND PRICE (Contd.)


Division of \$1 - Why are the angles of  $1/8$  of a circle most important for time and space measurements?  
 $1/8$  Points Because we divide \$1 into  $1/2$ ,  $1/4$  and  $1/8$  parts. We use 25¢ or 1 quarter, 50¢ or half dollar, and many years ago we had  $12\frac{1}{2}$ ¢ pieces

While the most important figures of our basis of money are the 4 quarters, we do use the  $1/8$  part or  $12\frac{1}{2}$ ¢ in all calculations. Grain fluctuations are based on  $1/8$ ,  $1/4$ ,  $3/8$ ,  $1/2$ ,  $5/8$ ,  $3/4$ ,  $7/8$  and the whole figure. Therefore, any price measurement, as well as time, will work out closer to these figures when changed into angles of time rather than  $1/2$  or  $2/3$  points of price for the simple reason that the fluctuations moving in  $1/8$  proportions must come out closer to these figures. We use the denominations of 5¢ which equals  $1/20$  of a dollar, and 10¢ which equals  $1/10$  of a dollar.

Figuring \$100, or par, as a basis for Grain prices and changing these prices to degrees,  $12\frac{1}{2}$  equals  $45^\circ$ , 25 equals  $90^\circ$ ,  $37\frac{1}{2}$  equals  $135^\circ$ , 50 equals  $180^\circ$ ,  $62\frac{1}{2}$  equals  $225^\circ$ , 75 equals  $270^\circ$ ,  $82\frac{1}{2}$  equals  $315^\circ$  and \$100 equals  $360^\circ$ .

Example: When an option sells at 50 on the 180th day, week or month, it is on the degree of its time angle.

Follow all the rules, study and experiment, and you will learn to do by doing, and make a success!



W. D. GANN

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